



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/836,177	04/18/2001	Norihito Fujita	017344/0316	7396

22428 7590 10/05/2004

FOLEY AND LARDNER  
SUITE 500  
3000 K STREET NW  
WASHINGTON, DC 20007

EXAMINER

LAZARO, DAVID R

ART UNIT	PAPER NUMBER
----------	--------------

2155

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/836,177

Applicant(s)

FUJITA, NORIHITO

Examiner

David Lazaro

Art Unit

2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 November 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 07/09/01.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Claims 1-12 are pending in this Office Action.
2. Change of Address received 04/03/03.
3. Formal Drawings received 11/05/02.

### ***Priority***

4. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

5. The information disclosure statement (IDS) submitted on 07/09/2001 has been considered by the examiner.

### ***Specification***

6. The disclosure is objected to because of the following informalities: On page 10, line 10, "backbone area 6" should be "backbone area 5".

Appropriate correction is required.

### ***Claim Objections***

7. Claims 1, 2, 5, 6, 9 and 10 are objected to because of the following informalities: In each of these claims, the phrase "corresponding to said areas" (such as from line 7 of Claim 1) is not entirely clear as to the specific "areas" being referenced. For example, is

Art Unit: 2155

it all "areas" of the network (as described in the preamble of Claim 1) or the "at least one traversable area" (such as from line 6 of Claim 1). Appropriate correction is required.

8. In regard to Claim 3: A series of singular dependent claims is permissible in which a dependent claim refers to a preceding claim which, in turn, refers to another preceding claim.

A claim which depends from a dependent claim should not be separated by any claim which does not also depend from said dependent claim. It should be kept in mind that a dependent claim may refer to any preceding independent claim. In general, applicant's sequence will not be changed. See MPEP § 608.01(n).

The Examiner believes there is a typographical error in Claim 3 and that Claim 3 should depend on Claim 2, not Claim 1. Appropriate correction is required.

9. Claims 4, 8 and 12 objected to because of the following informalities: It is not entirely clear as to the meaning of the phrase "a plurality of two hop count values" (emphasis added). The specification does not mention a plurality of "two" hop count values, only a plurality of hop count values. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 2155

11. Claims 5 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

12. Claims 5 and 9 recite the limitation "said router" in line 2 of Claim 5 and in lines 2-3 of Claim 9. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Request for Comments 2328 "OSPF Version 2" (RFC 2328) in view of Request for Comments 2676 "QoS Routing Mechanisms and OSPF extensions" (RFC 2676). Note: Both of these references were provided by the Applicant through the IDS submitted 07/09/01 and will not be provided with this Office Action.

15. With respect to Claim 1, RFC 2328 teaches a router for a hierarchical communication network which is divided into a plurality of areas in each of which a plurality of said router are interconnected by links (Figure 2, Page 19 - Note: Page numbers refer to the actual RFC page numbers), comprising: a first table having a plurality of entries respectively corresponding to reachable destinations, each of the entries including an intra-area or inter-area indication and an area identifier identifying at

Art Unit: 2155

least one traversable area (Table 13, Page 114), a processor, responsive to a request signal specifying a destination, for making reference to one of the entries of the first table corresponding to the specified destination, selecting links of the area identified by the area identifier of the reference entry (Section 11.1, Page 111 and Section 11.3, Page 112), and performing a calculation according to a shortest path finding algorithm on the selected links to find a shortest path to the specified destination if the intra-area indication is included in the reference entry, or performing said shortest path calculation on the selected links to find a shortest path tree in the identified area and determining a route from the shortest path tree (Section 16, Pages 160-161). RFC 2328 does not explicitly disclose tables corresponding to said areas with each of the tables holding quality-of-service (QoS) values of the links of the corresponding area. RFC 2328 also does not disclose using these tables in response to a request with a QoS value such that links are selected based on satisfying the QoS value. RFC 2676 teaches the use of tables with QoS values of links in a corresponding area, where the table is used to select links from the corresponding area such that they satisfy the specified QoS value (Section B., Page 36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the router disclosed by RFC 2328 and modify it as indicated by RFC 2676 such that the router further comprises: a plurality of second tables respectively corresponding to said areas, each of the second tables holding quality-of-service (QoS) values of the links of the corresponding area; and a processor, responsive to a request signals specifying a destination and a QoS value, for making reference to one of the entries of the first table and one of the second tables

Art Unit: 2155

corresponding to the specified destination, selecting links of the area identified by the area identifier of the referenced entry which links satisfy the specified QoS value. One would be motivated to have this, as there is need for Quality of Service routing in IP networks (Section 1, Page 3 of RFC 2676).

16. With respect to Claim 2, RRFC 2328 teaches a router for a hierarchical communication network which is divided into a plurality of areas in each of which a plurality of said router are interconnected by links, wherein neighboring ones of said areas are interconnected by at least one area border router (Figure 2, Page 19 - Note: Page numbers refer to the actual RFC page numbers), comprising: a first table having a plurality of entries respectively corresponding to reachable destinations, each of the entries including an intra-area or inter-area indication and an area identifier identifying at least one traversable area (Table 13, Page 114), a processor, responsive to a request signal specifying a destination, for making reference to one of the entries of the first table corresponding to the specified destination, selecting links of the area identified by the area identifier of the reference entry (Section 11.1, Page 111 and Section 11.3, Page 112), and performing a calculation according to a shortest path finding algorithm on the selected links to find a shortest path to the specified destination if the intra-area indication is included in the reference entry, or performing said shortest path calculation on the selected links to find a shortest path tree in the identified area and determining a route from the shortest path tree (Section 16, Pages 160-161). RFC 2328 does not explicitly disclose tables corresponding to said areas with each of the tables holding quality-of-service (QoS) values of the links of the corresponding area. RFC 2328 also

Art Unit: 2155

does not disclose using these tables in response to a request with a QoS value such that links are selected based on satisfying the QoS value. RFC 2676 teaches the use of tables with QoS values of links in a corresponding area, where the table is used to select links from the corresponding area such that they satisfy the specified QoS value (Section B., Page 36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the router disclosed by RFC 2328 and modify it as indicated by RFC 2676 such that the router further comprises: a plurality of second tables respectively corresponding to said areas, each of the second tables holding quality-of-service (QoS) values of the links of the corresponding area; and a processor, responsive to a request signals specifying a destination and a QoS value, for making reference to one of the entries of the first table and one of the second tables corresponding to the specified destination, selecting links of the area identified by the area identifier of the referenced entry which links satisfy the specified QoS value. One would be motivated to have this, as there is need for Quality of Service routing in IP networks (Section 1, Page 3 of RFC 2676).

17. With respect to Claim 3, RFC 2328 in view of RFC 2676 teaches all the limitations of Claim 2 and further teaches a third table corresponding to a destination reachable via at least one traversable area, said third table containing a plurality of router identifiers identifying a plurality of area border routers and a plurality of QoS values of routers from said plurality of area border routers to the destination, wherein said processor is configured to determine said route depending on said plurality of QoS



values (Section 3.1, Page 17 and Section 3.3, Page 22 of RFC 2676, specifically in regard to the use of Summary LSAs. See also Section 12.4.3, Page 135 of RFC 2328).

18. With respect to Claim 4, RFC 2328, in view of RFC 2676 teaches all the limitations of Claim 3 and further teaches said third table further contains a plurality of two hop count values of said routes from said plurality of area border routers to the destination, and wherein said process is configured to determine said route to one of said plurality of area border routers depending on hop count values of said traversable area plus the hop count values of said third table (Section B, Page 36 of RFC 2676).

19. With respect to Claim 5, RFC 2328 teaches a hierarchical communication network which is divided into plurality of areas in each of which a plurality of said router are interconnected by links (Figure 2, Page 19 - Note: Page numbers refer to the actual RFC page numbers), each of said routers comprising: a first table having a plurality of entries respectively corresponding to reachable destinations, each of the entries including an intra-area or inter-area indication and an area identifier identifying at least one traversable area (Table 13, Page 114), a processor, responsive to a request signal specifying a destination, for making reference to one of the entries of the first table corresponding to the specified destination, selecting links of the area identified by the area identifier of the reference entry (Section 11.1, Page 111 and Section 11.3, Page 112), and performing a calculation according to a shortest path finding algorithm on the selected links to find a shortest path to the specified destination if the intra-area indication is included in the reference entry, or performing said shortest path calculation on the selected links to find a shortest path tree in the identified area and determining a

Art Unit: 2155

route from the shortest path tree (Section 16, Pages 160-161). RFC 2328 does not explicitly disclose tables corresponding to said areas with each of the tables holding quality-of-service (QoS) values of the links of the corresponding area. RFC 2328 also does not disclose using these tables in response to a request with a QoS value such that links are selected based on satisfying the QoS value. RFC 2676 teaches the use of tables with QoS values of links in a corresponding area, where the table is used to select links from the corresponding area such that they satisfy the specified QoS value (Section B., Page 36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the routers disclosed by RFC 2328 and modify it as indicated by RFC 2676 such that the routers further comprise: a plurality of second tables respectively corresponding to said areas, each of the second tables holding quality-of-service (QoS) values of the links of the corresponding area; and a processor, responsive to a request signals specifying a destination and a QoS value, for making reference to one of the entries of the first table and one of the second tables corresponding to the specified destination, selecting links of the area identified by the area identifier of the referenced entry which links satisfy the specified QoS value. One would be motivated to have this, as there is need for Quality of Service routing in IP networks (Section 1, Page 3 of RFC 2676).

20. With respect to Claim 6, RFC 2328 teaches a hierarchical communication network which is divided into a plurality of areas in each of which a plurality of routers are interconnected by links, wherein neighboring ones of said areas are interconnected by at least one area border router (Figure 2, Page 19 - Note: Page numbers refer to the

actual RFC page numbers), each of the routers comprising: a first table having a plurality of entries respectively corresponding to reachable destinations, each of the entries including an intra-area or inter-area indication and an area identifier identifying at least one traversable area (Table 13, Page 114), a processor, responsive to a request signal specifying a destination, for making reference to one of the entries of the first table corresponding to the specified destination, selecting links of the area identified by the area identifier of the reference entry (Section 11.1, Page 111 and Section 11.3, Page 112), and performing a calculation according to a shortest path finding algorithm on the selected links to find a shortest path to the specified destination if the intra-area indication is included in the reference entry, or performing said shortest path calculation on the selected links to find a shortest path tree in the identified area and determining a route from the shortest path tree (Section 16, Pages 160-161). RFC 2328 does not explicitly disclose tables corresponding to said areas with each of the tables holding quality-of-service (QoS) values of the links of the corresponding area. RFC 2328 also does not disclose using these tables in response to a request with a QoS value such that links are selected based on satisfying the QoS value. RFC 2676 teaches the use of tables with QoS values of links in a corresponding area, where the table is used to select links from the corresponding area such that they satisfy the specified QoS value (Section B., Page 36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the routers disclosed by RFC 2328 and modify it as indicated by RFC 2676 such that the routers further comprise: a plurality of second tables respectively corresponding to said areas, each of the second tables holding

Art Unit: 2155

quality-of-service (QoS) values of the links of the corresponding area; and a processor, responsive to a request signals specifying a destination and a QoS value, for making reference to one of the entries of the first table and one of the second tables corresponding to the specified destination, selecting links of the area identified by the area identifier of the referenced entry which links satisfy the specified QoS value. One would be motivated to have this, as there is need for Quality of Service routing in IP networks (Section 1, Page 3 of RFC 2676).

21. With respect to Claim 7, RFC 2328 in view of RFC 2676 teaches all the limitations of Claim 6 and further teaches a third table corresponding to a destination reachable via at least one traversable area, said third table containing a plurality of router identifiers identifying a plurality of area border routers and a plurality of QoS values of routers from said plurality of area border routers to the destination, wherein said processor is configured to determine said route depending on said plurality of QoS values (Section 3.1, Page 17 and Section 3.3, Page 22 of RFC 2676, specifically in regard to the use of Summary LSAs. See also Section 12.4.3, Page 135 of RFC 2328).

22. With respect to Claim 8, RFC 2328, in view of RFC 2676 teaches all the limitations of Claim 7 and further teaches said third table further contains a plurality of two hop count values of said routes from said plurality of area border routers to the destination, and wherein said process is configured to determine said route to one of said plurality of area border routers depending on hop count values of said traversable area plus the hop count values of said third table (Section B, Page 36 of RFC 2676).

23. With respect to Claim 9, RFC 2328 teaches a routing method for a hierarchical communication network which is divided into a plurality of areas in each of which a plurality of said router are interconnected by links (Figure 2, Page 19 - Note: Page numbers refer to the actual RFC page numbers), each of said routers comprising a first table having a plurality of entries respectively corresponding to reachable destinations, each of the entries including an intra-area or inter-area indication and an area identifier identifying at least one traversable area (Table 13, Page 114), each of said routers functioning as a source router when a request signal is received, the method comprising the steps of: a) receiving, at the source router, a request signal specifying a destination and making reference to one of the entries of the first table corresponding to the specified destination (Section 11.1, Page 111 and Section 11.3, Page 112); b) selecting links of the area identified by the area identifier of the reference entry (Section 11.1, Page 111 and Section 11.3, Page 112); c) and performing a calculation according to a shortest path finding algorithm on the selected links to find a shortest path to the specified destination if the intra-area indication is included in the reference entry, or performing said shortest path calculation on the selected links to find a shortest path tree in the identified area and determining a route from the shortest path tree (Section 16, Pages 160-161). RFC 2328 does not explicitly disclose tables corresponding to said areas with each of the tables holding quality-of-service (QoS) values of the links of the corresponding area. RFC 2328 also does not disclose using these tables in response to a request with a QoS value such that links are selected based on satisfying the QoS value. RFC 2676 teaches the use of tables with QoS values of links in a

Art Unit: 2155

corresponding area, where the table is used to select links from the corresponding area such that they satisfy the specified QoS value (Section B., Page 36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by RFC 2328 and modify it as indicated by RFC 2676 such that there is a plurality of second tables respectively corresponding to said areas, each of the second tables holding quality-of-service (QoS) values of the links of the corresponding area in a method that further comprises: a) receiving, at the source router, a request signals specifying a destination and a QoS value and making reference to one of the entries of the first table and one of the second tables corresponding to the specified destination; b) selecting links of the area identified by the area identifier of the referenced entry which links satisfy the specified QoS value. One would be motivated to have this, as there is need for Quality of Service routing in IP networks (Section 1, Page 3 of RFC 2676).

24. With respect to Claim 10, RFC 2328 teaches a routing method for a hierarchical communication network which is divided into a plurality of areas in each of which a plurality of said router are interconnected by links, the routers of neighboring being interconnected by at least one area border router (Figure 2, Page 19 - Note: Page numbers refer to the actual RFC page numbers), wherein each of the routers functions as a source router when a request signal is received and includes a first table having a plurality of entries respectively corresponding to reachable destinations, each of the entries including an intra-area or inter-area indication and an area identifier identifying at least one traversable area (Table 13, Page 114), and a list of area border routers if said

Art Unit: 2155

inter-area indication is included (Section 12.4.3, Page 134 and Section 16.2, Page 168-198), the method comprising the steps of: a) receiving, at the source router, a request signal specifying a destination and making reference to one of the entries of the first table corresponding to the specified destination (Section 11.1, Page 111 and Section 11.3, Page 112); b) selecting links of the area identified by the area identifier of the reference entry (Section 11.1, Page 111 and Section 11.3, Page 112); c) and performing a calculation according to a shortest path finding algorithm on the selected links to find a shortest path to the specified destination if the intra-area indication is included in the reference entry, or performing said shortest path calculation on the selected links until a shortest path tree is found for all routers of the list of the reference entry or until an end of the calculation is reached when said tree is not found for all said routers if the inter-area indication is included in the reference entry (Section 16, Pages 160-161). RFC 2328 does not explicitly disclose tables corresponding to said areas with each of the tables holding quality-of-service (QoS) values of the links of the corresponding area. RFC 2328 also does not disclose using these tables in response to a request with a QoS value such that links are selected based on satisfying the QoS value so that a router can be determined from the shortest path tree having an optimum QoS value. RFC 2676 teaches the use of tables with QoS values of links in a corresponding area, where the table is used to select links from the corresponding area such that they satisfy the specified QoS value for determining the route with the optimum QoS value (Section B., Page 36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed

Art Unit: 2155

by RFC 2328 and modify it as indicated by RFC 2676 such that there is a plurality of second tables respectively corresponding to said areas, each of the second tables holding quality-of-service (QoS) values of the links of the corresponding area in a method that further comprises: a) receiving, at the source router, a request signals specifying a destination and a QoS value and making reference to one of the entries of the first table and one of the second tables corresponding to the specified destination; b) selecting links of the area identified by the area identifier of the referenced entry which links satisfy the specified QoS value; c) and performing a calculation according to a shortest path finding algorithm on the selected links to find a shortest path to the specified destination if the intra-area indication is included in the reference entry, or performing said shortest path calculation on the selected links until a shortest path tree is found for all routers of the list of the reference entry or until an end of the calculation is reached when said tree is not found for all said routers if the inter-area indication is included in the reference entry, and determining from the shortest path tree a route having an optimum QoS value. One would be motivated to have this, as there is need for Quality of Service routing in IP networks (Section 1, Page 3 of RFC 2676).

25. With respect to Claim 11, RFC 2328 in view of RFC 2676 teaches all the limitations of Claim 10 and further teaches a third table corresponding to a destination reachable via at least one traversable area, said third table containing a plurality of router identifiers identifying a plurality of area border routers and a plurality of QoS values of routers from said plurality of area border routers to the destination, wherein the step (c) determines said route depending on said plurality of QoS values (Section



3.1, Page 17 and Section 3.3, Page 22 of RFC 2676, specifically in regard to the use of Summary LSAs. See also Section 12.4.3, Page 135 of RFC 2328).

26. With respect to Claim 12, RFC 2328, in view of RFC 2676 teaches all the limitations of Claim 11 and further teaches said third table further contains a plurality of two hop count values of said routes from said plurality of area border routers to the destination, and wherein the step (c) comprises the step of determining said route to one of said plurality of area border routers depending on hop count values of said traversable area plus the hop count values of said third table (Section B, Page 36 of RFC 2676).

### ***Conclusion***

27. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

28. U.S. Patent 6,055,561 by Feldman et al. "Mapping of routing traffic to switching networks" April 25, 2000

29. U.S. Patent 6,094,687 by Drake, Jr. et al. "System and method for connecting source nodes and destination nodes regarding efficient quality of services route determination using connection profiles" July 25, 2000

30. U.S. Patent 6,141,325 by Gerstel "Paradigm for enabling interoperability between different subnetworks" October 31, 2000

31. U.S. Patent 6,600,724 by Cheng "Routing table structures" July 29, 2003


Art Unit: 2155


32. U.S. Patent 6,644,544 by Rexford et al. "Efficient precomputation of quality-of-service routes" October 14, 2003
33. U.S. Patent 6,661,797 by Goel et al. "Quality of service based path selection for connection-oriented networks" December 9, 2003

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Lazaro whose telephone number is 703-305-4868 (571-272-3986 after October 27, 2004). The examiner can normally be reached on 8:30-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on 703-308-6662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
David Lazaro  
September 30, 2004

  
HOSAIN ALAM  
SUPERVISORY PATENT EXAMINER